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| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | | |
| EXAMINER | | | | |
| RAMDHANE, BOBBY | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/568,584

Applicant(s)

SENS ET AL.

Examiner

BOBBY RAMDHANIE

Art Unit

1797

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 78-96 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 78-96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/200)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 78-96 have been considered but are moot in view of the new ground(s) of rejection. The new grounds of rejections are necessitated by Applicants amendments to the Claims which now recite that the specific intensity distribution is not homogenous and determining an extent to which the specific intensity distribution of the masked radiation correlates with the response function.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 78, 80-82, 86-88, 90, & 92 are rejected under 35 U.S.C. 102(b) as being anticipated by Allen (US 2851805).
4. Applicants' claims are toward a method.
5. Regarding Claims 78, 80-82, 86-88, 90, & 92, Allen discloses the method for detecting change of a physically measurable property of a sample, comprising: (i) generating and passing radiation through an optical mask to generate masked radiation having a specific intensity distribution, the specific intensity distribution having a known

pattern function that depends on a position where the radiation has passed through the mask, and the specific intensity distribution is not homogeneous (See Column 1 lines 15-36; actinic rays, sun's rays of an ultraviolet lamp are not homogeneous & optical mask is the tattoo comprising multiple laminations); (ii) subjecting the sample to the masked radiation for a defined action time, to thereby cause a change in a physical property of the sample during the defined action time (See Column 1 lines 15-36; a defined action time is inherent for the mask with a specific intensity distribution to form); (iii) detecting at least one of transmission, reflection, and scattering of analysis radiation generated by at least one of transmission, reflection, and scattering of the masked radiation by the sample, as a function of position coordinates of the analysis radiation relative to the sample and a wavelength of the analysis radiation, so as to determine a response function that describes intensity of the at least one of transmitted, reflected, and scattered analysis radiation as a function of the position coordinates relative to the sample and the wavelength (See Column 2 lines 43-46); and (iv) determining a correlation of the specific intensity distribution of the masked radiation with the response function by a correlation analysis, the correlation analysis producing a measure of a change of the physically measurable property of the sample due to the masked radiation during the defined action time, and determining an extent to which the specific intensity distribution of the masked radiation correlates with the response function (See Column 2 lines 43-46; Step (iii) and (iv) are done by the human eye to the specific intensity distribution of the optical mask used and the desire of the user).

6. Additional Disclosures Included: Claim 80: The specific intensity distribution produced a reference pattern on the sample during said step of (ii) subjecting (See Rejection to Claim 1. The reference pattern is the surface of the skin outside of the optical mask and gradations of the laminated sections/layers of the optical mask); Claim 81: The specific intensity distribution is produced by the mask that has a wavelength-dependent transmission function (See Column 1 lines 29-36); Claim 82: The radiation is generated by artificial or natural sunlight (See Column 1 lines 19-22); Claim 86: The at least one of the transmission, reflection, and scattering of analysis radiation by the sample is determined for a plurality of wavelength ranges, so as to determine a plurality of response functions for the plurality of wavelength ranges (See Column 2 lines 44-46; the specific intensity distribution pattern is determined by a human eye which requires either natural or artificial light to observe the specific intensity distribution and natural or artificial sunlight a plurality of wavelength ranges); Claim 87: The method as claimed in claim 78, wherein the response function is respectively determined for red, green and blue light by RGB analysis (See Column 2 lines 44-46; the specific intensity distribution pattern is determined by a human eye which performs RGB analysis); Claim 88: The method as claimed in claim 78, wherein the reflection of the analysis radiation is detected (See Column 2 lines 44-46; the specific intensity distribution pattern is determined by a human eye detects the reflected analysis radiation from the specific intensity distribution pattern); Claim 90: The scattering of the analysis radiation is detected (See Column 2 lines 43-46; the human eye detects the transmission, reflection, and scattering of the analysis radiation of the specific intensity distribution);

and Claim 92: The at least one of the reflection and scattering of the analysis radiation by the sample as a function of the position coordinates relative to the sample is detected using a color scanner (See Column 2 lines 43-46; the human eye can be interpreted as a color scanner).

7. Claims 78-82, 84-88, & 90 are rejected under 35 U.S.C. 102(b) as being anticipated by Turnbull et al (*Journal of Material Science*, 32, 1997, pp. 2313-2327).

8. Applicants' claims are toward a method.

9. Regarding Claims 78-82, 84-88, & 90, Turnbull et al discloses the method for detecting change of a physically measurable property of a sample, comprising: (i) generating and passing radiation through an optical mask to generate masked radiation having a specific intensity distribution, the specific intensity distribution having a known pattern function that depends on a position where the radiation has passed through the mask, and the specific intensity distribution is not homogeneous (See Page 2314 Section 2.2 Exposure conditions; 2.2.1 Artificial Exposure - xenon arc lamp and filter & 2.2.2 Natural Exposure sunlight and air atmosphere is interpreted as an optical mask); (ii) subjecting the sample to the masked radiation for a defined action time, to thereby cause a change in a physical property of the sample during the defined action time (See Page 2314 Section 2.2 Exposure conditions; 2.2.1 Artificial Exposure, 2.2.2 Natural Exposure, & Tables I & II); (iii) detecting at least one of transmission, reflection, and scattering of analysis radiation generated by at least one of transmission, reflection, and scattering of the masked radiation by the sample, as a function of position coordinates

of the analysis radiation relative to the sample and a wavelength of the analysis radiation, so as to determine a response function that describes intensity of the at least one of transmitted, reflected, and scattered analysis radiation as a function of the position coordinates relative to the sample and the wavelength (See Page 2315 Left Column FT-IR, SEM X-Ray analysis, Color and Gloss Measurements); and (iv) determining a correlation of the specific intensity distribution of the masked radiation with the response function by a correlation analysis, the correlation analysis producing a measure of a change of the physically measurable property of the sample due to the masked radiation during the defined action time, and determining an extent to which the specific intensity distribution of the masked radiation correlates with the response function (See Results for FT-IR, SEM-X-ray analysis, Color and Gloss Measurements).

10. Additional Disclosures Included: Claim 79: The radiation includes light in a wavelength between 400nm and 800nm (See Page 2314 Section 2.2 Exposure conditions; 2.2.1 Artificial Exposure - xenon arc lamp and filter & 2.2.2 Natural Exposure); Claim 80: The specific intensity distribution produced a reference pattern on the sample during said step of (ii) subjecting (See Rejection to Claim 78; the borosilicate glass and air atmosphere produces an inherent reference pattern on the sample); Claim 81: The specific intensity distribution is produced by the mask that has a wavelength-dependent transmission function (See Page 2314 Section 2.2 Exposure conditions; 2.2.1 Artificial Exposure; filter & 2.2.2 Natural Exposure; air atmosphere); Claim 82: (Previously Presented): The method as claimed in claim 78, wherein the radiation is generated by artificial or natural sunlight (See Page 2314 Section 2.2 Exposure

conditions; 2.2.1 Artificial Exposure; xenon arc radiation source & 2.2.2 Natural Exposure; natural sunlight); Claim 84: The specific intensity distribution is a periodic intensity distribution with a spatial frequency (See Page 2314 Section 2.2 Exposure conditions; 2.2.1 Artificial Exposure; filter & 2.2.2 Natural Exposure; air atmosphere); Claim 85: The at least one of the transmission, reflection, and scattering of analysis radiation is determined in at least one of Ultra Violet-Visible Spectroscopy and Near Infrared (See Results FT-IR Measurements); Claim 86: The at least one of the transmission, reflection, and scattering of analysis radiation by the sample is determined for a plurality of wavelength ranges, so as to determine a plurality of response functions for the plurality of wavelength ranges (See Results; FT-IR Measurements and Color); Claim 87: The response function is respectively determined for red, green and blue light by RGB analysis (See 3.3 Color); Claim 88: The reflection of the analysis radiation is detected (See 3.4 Gloss or 2.3 Scanning electron microscope with energy dispersive x-ray (EDX) analysis); and Claim 90: The scattering of the analysis radiation is detected (See 3.4 Gloss or 2.3 Scanning electron microscope with energy dispersive x-ray (EDX) analysis).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 83, 84, & 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen (US2851805) in view of (Whitney Matheson's "A true tale of tattoo envy." *USA TODAY*, *Published online: July 30, 2003*).

14. Applicants' claims are toward a method.

15. Regarding Claims 83, 84, & 96, Allen discloses the method as claimed in claim 78, except wherein the mask is a barcode mask.

16. Matheson discloses that forms of a specific intensity distribution having a known pattern function (a tattoo is interpreted as a specific intensity distribution having a known pattern function) are "mainstream" and 1 in 8 Americans have some type of specific intensity distribution having a known pattern function.

17. Matheson further discloses that the "Rock star," Pink released her last album, she got a bar code tattooed on her neck.

18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the optical mask of Allen to be in the form of a specific intensity distribution having a known pattern function such as a barcode in order to allow

the user to have the perception of being like a "Rock Star" at the beach for all to see and be envy of.

19. Additional Disclosures Included: Claim 84: The specific intensity distribution is a periodic intensity distribution with a spatial frequency (See Matheson; bar code mask); Claim 96: The pattern function is generated by a periodic grating structure on the mask (See Matheson; bar code produces a periodic grating structure).

20. Claims 89 & 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turnbull et al (*Journal of Material Science* 32, 1997, pp. 2313-2327) in view of Kessler et al (US 20040149021).

21. Applicants' claim is toward a method.

22. Regarding Claims 89 & 93, Turnbull et al discloses the method as claimed in claims 88 & 78 respectively, except for further comprising the step of: using telecentric measurement optics for detecting the reflection of the analysis radiation or the at least one of the reflection and scattering of the analysis radiation by the sample as a function of the position coordinates relative to the sample is detected using a digital camera. Turnbull et al does however disclose that an electron scanning microscope can be used for the reflection of the analysis radiation.

23. Kessler et al discloses a scanning electron microscope in which telecentric measurement optics are used for detecting the reflection of the analysis radiation (See [0044]). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to use the scanning electron microscope of Kessler et al because according to Kessler et al, Optimized optical systems, such as a telecentric lens system, can be used in the camera. Such systems are widely used in optical metrology because they reduce measurement or positional errors in the image (See [0044]).

24. Additional Disclosures Included: Claim 93: The at least one of the reflection and scattering of the analysis radiation by the sample as a function of the position coordinates relative to the sample is detected using a digital camera (See Kessler et al; [0044]).

25. Claims 94 & 95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turnbull et al (*Journal of Material Science* 32, 1997, pp. 2313-2327).

26. Applicants' claim is toward a method.

27. Regarding Claims 94 & 95, Turnbull et al discloses the method as claimed in claim 78, except wherein the sample includes a substrate and that is covered with paint or that the paint is an automobile paint. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Turnbull et al to use a sample that includes a substrate and is covered with paint or that the paint is an automobile paint because the development and stability of acrylic polymers and PVC components painted for the automobile industry are routinely used in exterior components of automobiles for long periods of time in order to maintain the finish and appearance of the automobile.

28. Claim 91 is rejected under 35 U.S.C. 103(a) as being unpatentable over Turnbull et al (Journal of Material Science 32, 1997, pp. 2313-2327) in view of McKnight et al (*Journal of Research of the National Institute of Standards and Technology*, 1997, 102, pp. 489-498) .

29. Applicants' claim is toward a method.

30. Regarding Claim 91, Turnbull et al discloses the method as claimed in claim 90, except for further comprising the step of: using a confocal color measurement system for detecting the scattering of the analysis radiation. McKnight et al discloses the method of evaluating samples using a confocal color measurement system for detecting the scattering of the analysis radiation (See Page 495; Left Column). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Turnbull et al with the method of McKnight et al that further comprises the step of: using a confocal color measurement system for detecting the scattering of the analysis radiation because according to McKnight et al, this technique can provide measurements of the topography of the top surface of the coating as well as the positions, sizes, and topography of the sub-surface pigment particles down to about 250 nm in size, which would be of interest for samples that are continually tested up to a 16 year period of exposure.

Telephonic Inquiries

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

32. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BOBBY RAMDHANIE whose telephone number is (571)270-3240. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

36. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the

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Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. R./

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797